

METHOD AND APPARATUS FOR ACQUISITION AND TRACKING OF GPS SATELLITES AT LOW SIGNAL TO NOISE LEVELS

ABSTRACT OF THE DISCLOSURE

5 A method of acquisition a signal having a low signal to noise ratio (SNR).
The method comprises the steps of: (A) detecting a non-zero power in the signal
having the low SNR during a power detect process; (B) receiving the signal
having the low SNR by using a signal receiver having an antenna; (C)
accumulating a plurality of digital samples of the signal within a predetermined
10 period of time; and (D) employing an algorithm to correct defects in reception of
the signal having the low SNR by minimizing a set of parameters selected from
the group consisting of: {a carrier frequency offset; a code phase offset; and a
data bit misalignment}.